

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/549,352
Source: PCT
Date Processed by STIC: 09/28/2005

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.2.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

<u>ERROR DETECTED</u>	<u>SUGGESTED CORRECTION</u>	SERIAL NUMBER: <u>10/549,352</u>
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 ____ Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 ____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 ____ Misaligned Amino Numbering	The numbering under each 5 th amino acid is misaligned. Do not use tab codes between numbers; use space characters , instead.	
4 ____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text .	
5 ____ Variable Length	Sequence(s) ____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 ____ PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 ____ Skipped Sequences (OLD RULES)	Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 ____ Skipped Sequences (NEW RULES)	Sequence(s) ____ missing. If intentional , please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 ____ Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10 ____ Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: <u>Unknown, Artificial Sequence, or scientific name (Genus/species).</u> <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11 ____ Use of <220>	Sequence(s) ____ missing, the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 ____ PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 ____ Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>	



PCT

RAW SEQUENCE LISTING

DATE: 09/28/2005

PATENT APPLICATION: US/10/549,352

TIME: 13:53:52

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Output Set: N:\CRF4\09282005\J549352.raw

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 7 PAINE, Jacqueline Ann Mary
 8 SHIPTON, Catherine Ann
 11 <120> TITLE OF INVENTION: ENHANCED ACCUMULATION OF CAROTENOIDS IN PLANTS
 14 <130> FILE REFERENCE: 70237USPCT
 C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/549,352
 C--> 16 <141> CURRENT FILING DATE: 2005-09-14
 16 <150> PRIOR APPLICATION NUMBER: PCT/GB2004/001241
 17 <151> PRIOR FILING DATE: 2004-03-22
 19 <150> PRIOR APPLICATION NUMBER: US60/457,053
 20 <151> PRIOR FILING DATE: 2003-03-24
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Does Not Comply
 Corrected Diskette Needed
 Cpg-1, 3, 5,

Invalid Response,
 Organism can be either Artificial,
 Unknown or Genus Species, pls
 see gloss #10 on Exper Sum-
 mary sheet.

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same error

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DATE: 09/28/2005

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Output Set: N:\CRF4\09282005\J549352.raw

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350	ctcaacctat	tcatctctac	tcctctacat	aagtatcttc	agctaaatgt	tagaacataa	3420
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354	aagataaagc	aaaatgatgt	gtacataaaa	ctccagagct	atatgtcata	ttgcaaaaag	3540
356	aggagagctt	ataagacaag	gcatgactca	caaaaattca	tttgcccttc	gtgtcaaaaa	3600
358	gaggagggtt	ttacattatc	catgtcatat	tgcaaaagaa	agagagaaag	aacaacacaa	3660
360	tgtctgcgtc	attatacata	tctgtatgtc	catcattatt	catccacctt	tcgtgtacca	3720
362	cacttcatat	atcatgagtc	acttcatgtc	tggacattaa	caaactctat	cttaacattt	3780
364	agatgcaaga	gcctttatct	cactataaat	gcacgatgat	ttctcattgt	ttctcacaaa	3840
366	aagcattcag	ttcattagtc	ctacaacaac	gaattcgggt	tcccgggtac	agggtaaatt	3900
368	tctagttttt	ctccttcatt	ttcttgggtt	ggaccctttt	ctctttttat	ttttttgagc	3960
370	tttgatcttt	ctttaaactg	atctattttt	taattgattg	gttatcgtgt	aaatattaca	4020
372	tagctttaac	tgataatctg	attactttat	ttcgtgtgtc	tttgatcatc	ttgatagtta	4080
374	cagaaccgtc	gactctagag	aagccattta	aatcgccgcc	accatggcca	tcatactcgt	4140
376	acgagcagcg	tcgccggggc	tctccgcgcg	cgacagcatc	agccaccagg	ggactctcca	4200
378	gtgctccacc	ctgctcaaga	cgaagaggcc	ggcggcgcgc	cggtggatgc	cctgctcgct	4260
380	ccttggcctc	caccggtggg	aggctggccg	tccctcccc	gccgtctact	ccagcctcgc	4320
382	cgtcaaccgc	gcgggagagg	cgtcgtctc	gtccgagcag	aaggtctacg	acgtcgtgct	4380

RAW SEQUENCE LISTING

DATE: 09/28/2005

PATENT APPLICATION: US/10/549,352

TIME: 13:53:52

Input Set : A:\70237USPCT SEQUENCE LISTING.txt

Output Set: N:\CRF4\09282005\J549352.raw

```

384 caagcaggcc gcattgctca aacgccagct gcgcacgccg gtcctcgacg ccaggcccca 4440
386 ggacatggac atgccacgca acgggctcaa ggaagcctac gaccgctgcg gcgagatctg 4500
388 tgaggagtat gccaaagcgt ttacacctcg aactatgttg atgacagagg agcggcgccg 4560
390 cgccatatgg gccatctatg tgtggtgtag gaggacagat gagcttgtag atgggcaaaa 4620
392 cgccaaactac attacaccaa cagcttttga ccgggtggag aagagacttg aggatctgtt 4680
394 cacgggacgt ccttacgaca tgcttgatgc cgctctctct gataccatct caagggtccc 4740
396 catagacatt cagccattca gggacatgat tgaagggatg aggagtgatc ttaggaagac 4800
398 aagggtataac aacttcgacg agctctacat gtactgctac tatgttgctg gaactgtcgg 4860
400 gttaatgagc gtaccagtga tgggcatcgc atccgagtct aaagcaacaa ctgaaagcgt 4920
402 gtacagtgtc gccttggctc tcggaattgc gaaccaactc acgaacatac tccgggatgt 4980
404 tggagaggat gctagacgag gaaggatata ttaccacaaa gatgagcttg cacaggcagg 5040
406 gctctctgat gaggacatct tcaaaggggt cgtcacgaac cgggtggagaa acttcatgaa 5100
408 gaggcagatc aagagggcca ggatgttttt tgaggaggca gagagagggg taactgagct 5160
410 ctacacaggct agcagatggc cagtatgggc ttccctgttg ttgtacaggc agatcctgga 5220
412 tgagatcgaa gccaacgact acaacaactt cacgaagagg gcgtatgttg gtaaagggaa 5280
414 gaagttgcta gcacttcttg tggcatatgg aaaatcgcta ctgctcccat gttcattgag 5340
416 aaatggccag acctagggcc atgcaggccg atccccgac gtccaacat ttggcaataa 5400
418 agtttcttaa gattgaatcc tgttgccggg cttgcatga ttatcatata atttctgttg 5460
420 aattacgtta agcatgtaat aattaacatg taatgcatga cgttatttat gagatgggtt 5520
422 tttatgatta gagtcccgca attatacatt taatacgcga tagaaaacaa aatatagcgc 5580
424 gcaaactagg ataaattatc gcgcgcgggtg tcatctatgt tactagatcg 5630

```

427 <210> SEQ ID NO: 3

429 <211> LENGTH: 5180

431 <212> TYPE: DNA

433 <213> ORGANISM: SYNTHETIC - 12422

437 <400> SEQUENCE: 3

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438 gttaatcatg gtgtaggcaa cccaaataaa acacaaaaat atgcacaagg cagtttgttg 60
440 tattctgtag tacagacaaa actaaaagta atgaaagaag atgtggtgtt agaaaaggaa 120
442 acaatatcat gagtaatgtg tgagcattat gggaccacga aataaaaaga acattttgat 180
444 gagtcgtgta tctcagatga gctcaaaag ttctctcacc cgggataaga aacccttaag 240
446 caatgtgcaa agtttgcatt ctccactgac ataatgcaaa ataagatata atcgatgaca 300
448 tagcaactca tgcataatat catgcctctc tcaacctatt cattcctact catctacata 360
450 agtatcttca gctaaatgtt agaacataaa cccataagtc acgtttgatg agtattaggc 420
452 gtgacacatg acaaatcaca gactcaagca agataaagca aaatgatgtg tacataaaac 480
454 tccagagcta tatgtcatat tgcaaaaaga ggagagctta taagacaagg catgactcac 540
456 aaaaattcat ttgcctttcg tgtcaaaaag aggagggtt tacattatcc atgtcatatt 600
458 gcaaaagaaa gagagaaaga acaacacaaat gctgcgtcaa ttatacatat ctgtatgtcc 660
460 atcattatcc atccaccttt cgtgtaccac acttcatata tcatgagtca ctcatgtct 720
462 ggacattaac aaactctatc ttaacattta gatgcaagag cctttatctc actataaatg 780
464 cacgatgatt tctcattgtt tctcacaaaa agcattcagt tcattagtc tacaacaacg 840
466 aattcggctt cccaaatcgc cgccaccatg gcttctatga tatcctcttc cgtgtgaca 900
468 acagtcagcc gtgcctctag ggggcaatcc gccgcagtggt ctcatttcgg cggcctcaaa 960
470 tccatgactg gattcccagt gaagaaggtc aacactgaca ttacttccat tacaagcaat 1020
472 ggtggaagag taaagtgcac gaaaccaact acggtaattg gtgcaggctt cgggtggcctg 1080
474 gcaactggcaa ttcgtctaca agctgcgggg atccccgtct tactgcttga acaacgtgat 1140
476 aaaccggcg gtgggctta tgtctacgag gatcaggggt ttacctttga tgcaggcccg 1200
478 acggttatca ccatcccgag tgccattgaa gaactgtttg cactggcagg aaaacagtta 1260
480 aaagagtatg tcgaactgct gccggttacg ccgttttacc gctgtgttg ggagtcaggg 1320
482 aaggctctta attacgataa cgatcaaacc cggctcgaag cgcagattca gcagtttaat 1380

```

*Same Error
organism can be either
Artificial,
Unknown,
or Genus
Species.
Pls see
Item #
ID on
Error Sum-
mary sheet.*

The type of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/549,352

DATE: 09/28/2005
TIME: 13:53:53

Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

Use of <220> Feature(NEW RULES):

Sequence(s) are missing the <220> Feature and associated headings.

Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32) (Sec.1.823 of new Rules)

Seq#:22

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/549,352

DATE: 09/28/2005

TIME: 13:53:53

Input Set : A:\70237USPCT SEQUENCE LISTING.txt

Output Set: N:\CRF4\09282005\J549352.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:2513 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:2517 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:22, <213>
ORGANISM:Artificial Sequence
L:2517 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:22, <213>
ORGANISM:Artificial Sequence
L:2517 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:22,Line#:2517